

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
20 March 2003 (20.03.2003)

PCT

(10) International Publication Number  
**WO 03/022377 A1**

(51) International Patent Classification<sup>7</sup>: **A63C 11/22**

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(21) International Application Number: **PCT/FI02/00720**

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(22) International Filing Date:  
6 September 2002 (06.09.2002)

(81) Designated States (*national*): AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK (utility model), SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: **Finnish**

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM).

(26) Publication Language: **English**

(30) Priority Data:  
20011795 12 September 2001 (12.09.2001) FI

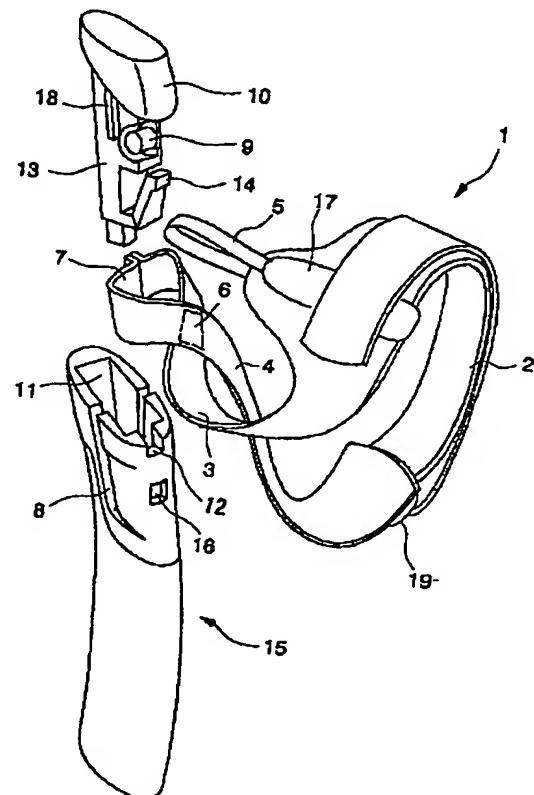
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*[Continued on next page]*

(54) Title: HANDGRIP FOR A SKI POLE, WHICH IS PROVIDED WITH A HANDSTRAP



(57) Abstract: The invention relates to a ski-pole handgrip, which is provided with a handstrap (1), including a strap section (2) which encircles the back of the hand and connects to the handgrip by way of transmission straps (3, 4) adjacent to the palm. The handgrip (15) has its top end provided with a cavity (11) closable with a removable cover (10), under which are attachment elements (7, 8) for the transmission straps (3, 4). The attachment elements (7, 8) for the transmission straps (3, 4) comprise open-top attachment recesses (8) present in the side walls of the cavity (11) of the handgrip (15). The transmission straps (3, 4) are connected to the fastening elements (7), which are in collaboration with the attachment recesses (8) for securing the handstrap (1) to the handgrip (15). The cover (10) closes the top ends of the attachment recesses (8) and/or the cover is provided with projections (18), which penetrate into the attachment recesses (8) for closing the attachment recesses (8).

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European patent (AT, BE, BG, CH, CY, CZ, DE, DK, BE,  
ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK,  
TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**Published:**

— *with international search report*

Handgrip for a ski pole, which is provided with a handstrap

The invention relates to a ski-pole handgrip, which is provided with a handstrap, including a strap section which encircles the back of the hand and

5 connects to the handgrip by way of transmission straps adjacent to the palm, in addition to which the handgrip has its top end provided with a cavity closable with a removable cover, under which are attachment elements for the transmission straps.

10 This type of ski-pole handgrips are prior known from the Applicant's earlier production, whereof reference can be made for example to Patent applications FI-19992525 and FI-20010126. In these prior known solutions, the attachment elements between a handstrap and a handgrip are of such a design that fastening the handstrap to the handgrip is a slow and

15 inconvenient process and requires special tools. This slows down production and increases manufacturing costs.

Patent publication EP-0357517 discloses another type of solution, wherein the attachment elements of a handgrip are in collaboration with an

20 attachment element associated with transmission straps in such way that the attachment elements can be quickly and easily released and re-connected. Manufacturing and assembling the release mechanism increases costs, and results in a component likely to malfunction in operation. However, being easily releasable is important, as the transmission elements are provided

25 with a hand-encircling guard and the transmission elements further include a wrist-encircling cuff. By virtue of the attachment elements being releasable, the cuff need not be unfastened nor the hand guard be left attached to a pole, whenever the pole is removed from the hand before or after a skiing action. This type of solution is poorly adaptable to cross-country ski poles,

30 wherein the user should have a freedom of choice regarding gloves and the handgrip should only be provided with transmission straps which enable the

hand to be readily and quickly slipped therein and also readily and quickly released therefrom.

It is an object of the invention to provide a ski-pole handgrip, which is

5    provided with a handstrap that is easy to manufacture regarding its attachment elements and readily and quickly connectable to the handgrip during the manufacturing process, and said handstrap enabling the hand to be easily and quickly slipped therein for a firm force transmitting position, and to be released therefrom.

10

This object is achieved by means of the invention on the basis of the characterizing features set forth in the appended claim 1. The non-independent claims disclose preferred embodiments of the invention.

15    One exemplary embodiment of the invention will now be described in more detail with reference to the accompanying drawing, which shows in an exploded perspective view a handgrip of the invention, along with a handstrap therefor.

20    A handstrap 1, adapted to be fastened to a handgrip 15, is consistent with a traditional handstrap in terms of its configuration and position, as well as its force transmitting features, thus comprising a strap section 2, which encircles the back of the hand and connects to the handgrip 15 by way of transmission straps 3, 4 adjacent to the palm. The handstrap includes also a

25    control strap 5 adjacent to the back of the hand. Regarding its position and function, a similar control strap has been described in Patent publications NO-160116 and SE-419168. The control strap 5 has a function of keeping the pole in contact with the user's hand in the process of pulling the pole back forward, even if the hand should totally release its hold from the

30    handgrip 15.

The handgrip 15 has its top end provided with a cavity 11, which is closable with a removable cover 10, under which is a fastening or attachment rod 9 for the control strap 5. The fastening rod 9 for the control strap 5 is integral with the removable cover 10. From the cover 10 projects downward a  
5 spigot-like member 13, which extends inside the recess 11 and is provided with a clamping lug 14 which clasps in a locking hole 16 present in the handgrip.

The handgrip 15 has the side walls of its cavity 11 provided with open-top  
10 attachment recesses 8 for fastening the transmission straps 3, 4. The force transmission straps 3, 4 are secured in the attachment recesses 8 by means of a fastening loop 7, which is received by the attachment recesses 8 in such a way that the fastening loop 7 encircles a rear portion of the handgrip's top end behind the attachment recesses 8. In the present case, the fastening  
15 loop 7 is constituted by the ends of the transmission straps 3, 4, but an option is a separate fastening loop, the ends of the transmission straps 3, 4 being attached thereto. The fastening loop 7 can be replaced also with a pivoting axle, which is fitted in the attachment recesses 8 and the ends of the transmission straps 3, 4 being attached to the ends of said axle. Hence,  
20 the transmission straps 3, 4, on the one hand, and the control strap 5, on the other hand, are provided with physically separate attachment elements, the transmission straps 3, 4 connecting directly to the handgrip body, which includes the attachment recesses 8, while the control strap 5 connects to the cover element 10 which is removable from the handgrip.

25 The transmission straps 3, 4 cross over each other regarding the sections thereof directly connected to the fastening loop 7. In addition, the transmission straps 3, 4 are attached to each other at a point 6, which is the cross-over point for the same and which lies immediately adjacent to the  
30 handgrip 15. Thus, the fastening loop 7 has a proper size to fit exactly

around the handgrip portion located immediately behind the attachment recesses 8.

A combination handgrip and handstrap of the invention is also readily

- 5 adaptable to hands of varying sizes. The strap section 2 encircling the back of the hand is provided with a length adjustment. In the present case, this is implemented such that the strap section 2 is extended through a buckle 19 in the form of a self-adhesive strap, which is attachable for a desired length adjustment position to the surface of the strap section 2. As for the control
- 10 strap 5, the adjustability is implemented in such a way that the control strap 5 is designed as a loop, which is extended around the rod-shaped attachment element 9, the strap loop 5 being adjustable regarding its length. For this purpose, the end of a strap constituting the control strap loop 5 is fitted with a self-adhesive section 17, which is attachable to an optional spot
- 15 on the outer surface of the strap section 2.

The attachment recesses 8 extend essentially lengthwise of the handgrip, but the recesses may have the bottom ends thereof directed obliquely downward and backward.

- 20
- 25 The cover 10 closes the attachment recesses 8 at top ends thereof. The cover 10 is further provided with projections 18, which penetrate into the attachment recesses 8 for closing the attachment recesses 8. Thus, the spigot-like member 13 passes through the fastening loop 7 and lies between the recesses 8.

The handgrip has its top end, at the cavity's 11 rear edge, provided with a recess 12 for the lead-through of the control strap 5. The recess 12 is located at a slightly higher level than the bottom ends of the attachment

- 30 recesses 8.

Claims

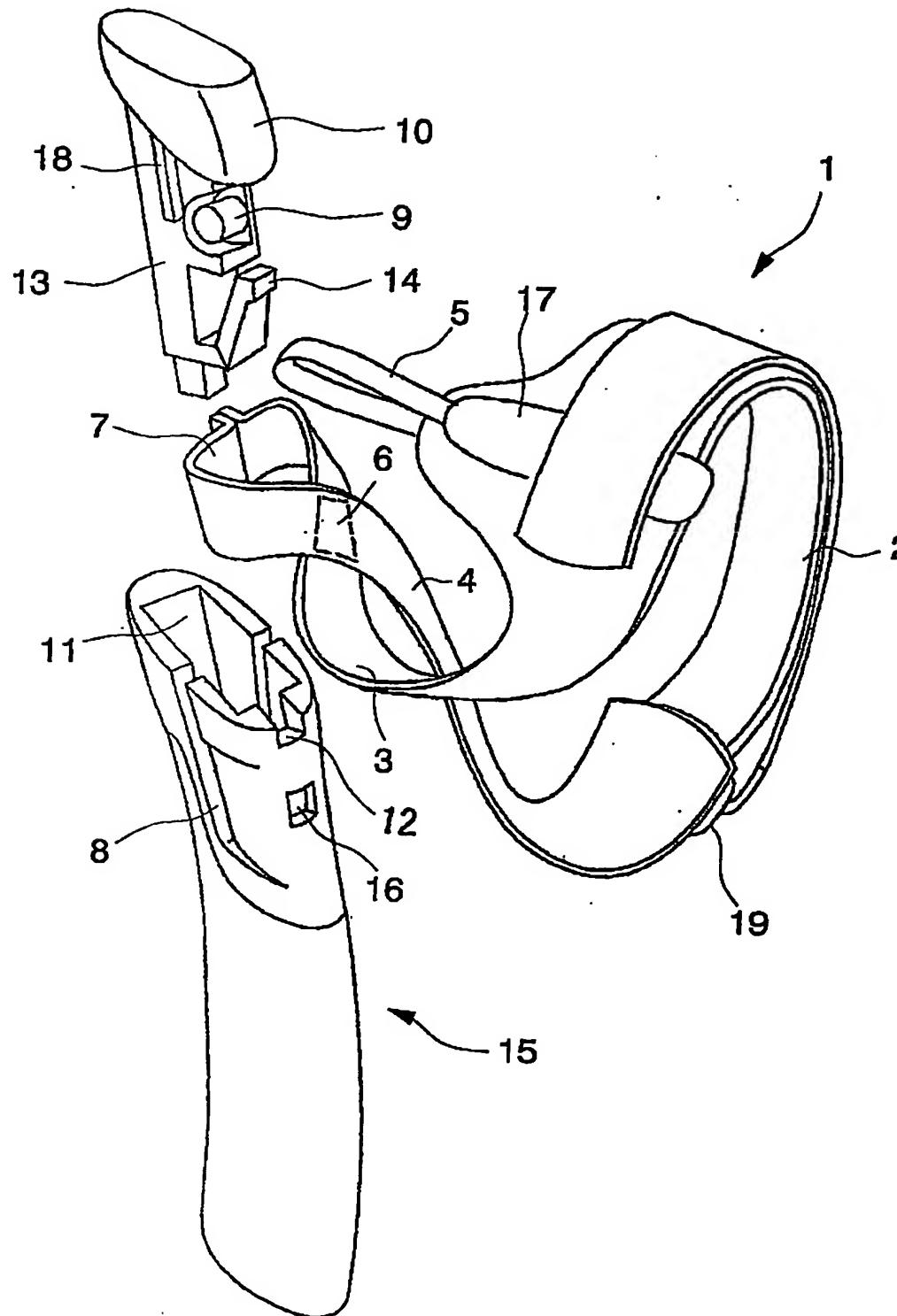
1. A ski-pole handgrip, which is provided with a handstrap (1), including a strap section (2) which encircles the back of the hand and connects to the handgrip by way of transmission straps (3, 4) adjacent to the palm, in addition to which the handgrip (15) has its top end provided with a cavity (11) closable with a removable cover (10), under which are attachment elements (7, 8) for the transmission straps (3, 4), **characterized in that** the attachment elements (7, 8) for the transmission straps (3, 4) comprise open-top attachment recesses (8) present in the side walls of the cavity (11) of the handgrip (15), that the transmission straps (3, 4) are connected to the fastening elements (7), which are in collaboration with the attachment recesses (8) for securing the handstrap (1) to the handgrip (15), and that the cover (10) closes the top ends of the attachment recesses (8) and/or the cover is provided with projections (18), which penetrate into the attachment recesses (8) for closing the attachment recesses (8).
2. A handgrip as set forth in claim 1, **characterized in that** the ends of the transmission straps (3, 4) constitute a fastening loop (7) or connect to a fastening loop, and that the fastening loop (7) is received by the attachment recesses (8) in such a way that the fastening loop (7) encircles a rear portion of the handgrip's (15) top end, which is left behind the attachment recesses (8).
3. A handgrip as set forth in claim 1 or 2, **characterized in that** the strap section (2) encircling the back of the hand is provided with a length adjustment.
4. A handgrip as set forth in any of claims 1-3, **characterized in that** adjacent to the back of the hand is a control strap (5), which constitutes a

loop that is extended around a rod-like attachment element (9), the length of said strap loop (5) being adjustable.

5. A handgrip as set forth in claim 4, **characterized** in that the strap constituting the control strap loop (5) has its end fitted with a self-adhesive section (17), which is attachable to an optional spot on the outer surface of the strap section (2) encircling the back of the hand.
10. 6. A handgrip as set forth in claim 1, **characterized** in that from the cover (10) of the cavity (11) projects downward a spigot-like member (13), which extends inside the cavity (11) in a region between the attachment recesses (8) and which is provided with a clamping lug (14) clasping in a locking hole (16) present in the handgrip.
15. 7. A handgrip as set forth in any of claims 4-6, **characterized** in that the attachment element (9) for the control strap (5) is integral with the cover (10) removable from the handgrip, and that the attachment recesses (8) for the transmission straps (3, 4) are formed in the actual body of the handgrip (15).

20. 8. A handgrip as set forth in any of claims 1-7, **characterized** in that the attachment recesses (8), which extend essentially lengthwise of the handgrip, have the bottom ends thereof directed obliquely downward and backward.

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## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/FI 02/00720

## A. CLASSIFICATION OF SUBJECT MATTER

**IPC7: A63C 11/22**

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

**IPC7: A63C**

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

**SE,DK,FI,NO classes as above**

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

**EPO-INTERNAL, WPI DATA, PAJ**

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6311370 B1 (C.J.M. BLIN), 6 November 2001 (06.11.01)	1,2
A	--	1-5
X	US 4130293 A (I. HINTERREITER), 19 December 1978 (19.12.78)	1
A	--	1-5
A	US 5294152 A (T. JACOBS), 15 March 1994 (15.03.94), figures 3,6	1-5
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 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"B" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
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Date of the actual completion of the international search

**4 December 2002**

Date of mailing of the international search report

**05 -12- 2002**

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## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/FI 02/00720

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

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Information on patent family members

28/10/02

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